

Week 05

Lab 07 - Continue, Break and two's complement

Compile and run the program below.

- 1) What is the role of continuing in it?
- 2) Replace one of the continue statements with a break statement and explain how this affects the program's behavior.
- 3) Modify the program to get rid of all the continue statements.

```
#include <stdio.h>

int main()
{
    int h = 500, count = 0;

    printf("All the numbers from %i to zero\n", h);
    puts("not divisible by 2, 3, 5 or 7:\n");

    do {
        if (h % 2 == 0) /* skip those divisible by 2 */
            continue;
        if (h % 3 == 0) /* ... by 3 */
            continue;
        if (h % 5 == 0) /* ... by 5 */
            continue;
        if (h % 7 == 0) /* ... by 7 */
            continue;
        printf("%5i", h);
        count++;
        if (count % 10 == 0) /* print 10 per line */
            putchar('\n');
    } while (h--);
    putchar('\n');
    return 0;
}
```

Using 4 bits in binary, represent the following in a two's complement machine. *Hint: 1111 represents -1*

4) -2

5) -5

6) 2

What are the integer values of the following in a two's complement machine?

7) 0001

8) 1110

9) 1001

10) 1000